

CLAIMS

Sub
AI

052280-10548E50

SC

1. A computerized method for use in simulating an operation of an electronic system, said method being carried out using a computer system, said method comprising the steps of:
 - generating a physically-accurate description of a first portion of said system, said physically-accurate description comprising actual physical characteristics of said first portion;
 - generating an approximate model of a remaining portion of said system, said model being based upon hierarchical analysis of said remaining portion; and
 - using both said physically-accurate description and said approximate model to simulate the operation of said system.
2. A method according to claim 1, wherein:
 - said first portion and said remaining portion are selected according simulation optimization rules.
3. A method according to claim 1, wherein:
 - said first and remaining portions are selected so as to optimally reduce simulation error.
4. A method according to claim 1, wherein:
 - said operation of said system comprises a timing operation.

Sub
A2

1 5. A computerized system for use in simulating an operation of an electronic system,
2 comprising the steps of:

3 a modeling engine that modifies a first model of said electronic system, said first
4 model including only hierarchical analysis functions estimating operation of said elec-
5 tronic system, said modeling engine modifying said first model to include both at least
6 one hierarchical analysis function estimating operation of a portion of said electronic
7 system and a physically-accurate description of another portion of said electronic system;
8 and

9 a simulation engine that simulates the operation of said electronic system based
10 upon both said at least one function and said physically-accurate description.

1 6. A computerized system according to claim 5, wherein:
2 said portions are selected so as to optimally reduce simulation error.

1 7. A computerized system according to claim 5, wherein:
2 said portions are selected based upon simulation optimization rules.

1 8. A computerized system according to claim 5, wherein:
2 said operation of said electronic system comprises a timing operation.

Sub
A3

1 9. A computer-readable memory containing computer-executable program instruc-
2 tions comprising instructions for:

3 generating a physically-accurate description of a first portion of an electronic
4 system, said physically-accurate description comprising actual physical characteristics of
5 said first portion;
6 generating an approximate model of a remaining portion of said system, said
7 model being based upon hierarchical analysis of said remaining portion; and
8 simulating operation of said system using both said description and said model.

1 10. A computer-readable memory according to claim 9, wherein:
2 said portions are selected to optimally reduce simulation error.

1 11. A computer-readable memory according to claim 9, wherein:
2 said first portion and said remaining portion are selected according to simulation
3 optimization rules.

1 12. A computer-readable memory according to claim 9, wherein:
2 said operation of said system comprises a timing operation.

Add
B

662280-10548660